

ABSTRACT

A method and apparatus for a universal transmitter that can learn and emulate the transmission frequency and modulation pattern of a template transmitter, without prior knowledge of such information. The universal transmitter is then operable to transmit the "learned" modulation pattern and transmission frequency to actuate a remote control receiver operable with the template transmitter. The universal transmitter is capable of recognizing a fixed-code pulse-modulated, frequency shift keying, or other transmission without prior knowledge of the frequency and modulation pattern. The universal transmitter includes multiple programmable switches to allow the universal transmitter to learn the modulation pattern and frequency of multiple transmitting sources and store the values in non-volatile memory.